Examples of Questions Asked During an Evaluation

Initial Questions

- **Information You Need to Evaluate a Task:**

  Scope (H*ow Often? / How Many? / How Long?*).

  Quality / Complexity (H*ow Precise? / How Difficult?*).

- **Answers to Initial Questions May Drive Follow-On Questions**

- **Many Task Estimates Can Be Reduced to an Equation**

  For Example:

  4 Meetings X 6 Hrs Per Mtg. (4 X 6 = 24).

  4 Men for 6 Mths @ 150 Hrs Per Mth (4 X 6 X 150 = 3,600).

  6,300 Lines of Code @ 4 Hrs Per LOC (6,300 X 4 = 25,200).

Sample Task Estimate

WBS	TASK	ESTIMATE	CATEGORY
1.1.2.1	Develop software for new Trainer	27,875 HRS	SR Programmer

Fact-finding Question Tree

- **Q: How Was Estimate of 27,875 Hrs Derived?**

  A: It Was Based on 11,150 LOC (Lines Of Code) @ 2.50 Hrs Per LOC

- **Q: What Is the Basis for the Number of LOC?**

  A: There Are 9,900 LOC in the Existing Trainer. The New Trainer Will Need 1,250 Additional LOC to Handle the Increased Capabilities of the New Trainer.

- **Q: Will the Existing Code Be Scrapped and Replaced by New Code?**

  A: No, Some Existing Code Will Be Modified but a Significant Amount of New Code Will Also Be Needed.

- **Q: How Many New Vs Modified LOC in the 11,150 Total?**

  A: The Estimate Is Based on 7,250 New and 3,900 Modified LOC.

Fact-finding Question Tree Continued

- **Q: Was the 2.50 Hrs Per LOC Applied to All LOC?**

  A: Yes

- **Q: What Is the 2.50 Hrs Per LOC Based on?**

  A: It Is Based on Experience From Other Programs.

- **Q: What Specific Programs Were Used?**

  A: Experience From the “Have-Bucks” Program and the “Need-More” Follow-on Program Was Used.

Fact-finding Question Tree Continued

- **Q: Please Provide the Data From Those Programs That Supports the 2.50 Hrs/LOC Metric.**

A:

PROGRAM	LOC	HOURS	HRS/LOC
HAVE-BUCKS	50,000	134,000	
NEED-MORE	12,000	21,000	
TOTAL	62,000	155,000	2.50*

*155,000 HRS / 62,000 LOC = 2.50 HRS PER LOC

Fact-finding Question Tree Continued

- **Q: How Many New & Modified LOC Were in Each Program?**

A: Have-Bucks Program Had 50,000 New LOC;

NEED-MORE Program Had 8,000 New & 4,000 Modified.

Based on This Last Answer , the Need-More Program Looks More Like Ours. We Need to Re-look at the Data Used by the Contractor.

PROGRAM	LOC	HOURS	AVG
HAVE-BUCKS	50,000	134,500	2.68
NEED-MORE	12,000	21,000	1.75
TOTAL	62,000	155,000	

Since the Need-More Code Mix Appears Closer to Our Task, the 1.75 Hrs/LOC May Be the Right Metric for Our Effort.

Objective = 1.75 hours x 11,150 = 19,513.5 hours versus 27,875 proposed.